Release Notes for Cisco NCS 2000 Series SVO, Release 12.0.1

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Software and Hardware Requirements

Before you begin to install the software, you must check whether your system meets the following minimum software and hardware requirements:

- Hardware—Intel Core i5, i7, or faster processor. A minimum of 4 GB RAM, 100 GB hard disk with 250 MB of available hard drive space
- Operating System—Windows 10; macOS Mojave(10.14) and later
- Java Runtime Environment—JRE 1.8 and later
- Java version—8.0
- Browsers—Mozilla Firefox 71 and later; Google Chrome 78.0 and later

What's New in NCS 2000 Series, Release 12.0.1

This section highlights the new features in Release 12.0.1.

Software

Manual and Automatic Calibration of RAMAN Amplifiers

The following Release 12.0.1 cards support calibration.

- The EDRA1-xx and EDRA2-xx cards support only automatic calibration.
- The RAMAN-COP card supports only manual calibration.
- The RAMAN-CTP card supports both automatic and manual calibration. However, if a node has both RAMAN-CTP and RAMAN-COP cards, the RAMAN-CTP card supports only manual calibration.

See Perform Manual Calibration, and Perform Automatic Calibration.

Connection Verification

The connection verification feature measures power levels and verifies the optical cables and patchcords in a node for the following:

- Connectivity: Checks whether the cable is connected.
- Insertion Loss: Checks whether the cable loss is within expected value.

The benefits of connection verification feature are as follows:

- Validates the 20-SMRFS-CV card connectivity with local Add/Drop or other ROADM elements.
- Detects any incorrect cabling in the ROADM network element.
- Collects insertion losses of each optical path inside the network element to detect possible failures.

See Connection Verification.

Alarm Profiles

The alarm profiles feature allows the user to change default alarm severities by creating unique alarm profiles for individual ports, cards, chassis, passive units, optical cross-connects, and optical interfaces.

When the user modifies severities in an alarm profile, all the Critical (CR) or Major (MJ) default or user-defined severity settings are demoted to Minor (MN) in Non-Service-Affecting (NSA) settings and the other way round as defined in Telcordia GR-474. Default severities are used for all alarms and conditions until the user creates a new profile and applies it.

See Alarm Profiles.

SSO Support from EPNM

SVO provides users to configure Single Sign On (SSO) authentication. The user can add SSO user as admin or superuser and enable SSO. If SSO is configured, Cisco Evolved Programmable Network Manager (EPNM) users can open the Shelf Virtualization Orchestrator (SVO) web user interface logging in as a current user without the need to log in with a password.

See Log into the SVO Web Interface Using EPNM.

Nodal Craft User Interface Enhancements

In the rack view along with alarms, the alarm severities are displayed with alarm icons based on the alarm severity colors. The expanded rack view on the left panel displays the maximum alarm severity for each chassis.

See Display Alarms.

Cisco Light Web User Interface for Remote OLA Node

The Cisco Light Web User Interface (UI) is a new stand-alone user interface on NCS 2000 with control card. This UI allows the user to bring up a new chassis or amplifier/remote node.

The light web UI performs the following functions:

- Enables the user to view the summary of an existing remote OLA node information such as device, network, and OSC configurations.
- Enables the user to provision new control card parameters for the OLA node.
- View the diagnostics.

See Cisco Light Web User Interface for Remote OLA Node.

Import of Configuration File from Cisco ONP to SVO NE

This feature allows the user to import the configuration file (NETCONF file) that is exported from Cisco Optical Network Planner (Cisco ONP) into SVO. The NETCONF file contains parameters for the node, shelf, card type, port, Pluggable Port Module (PPM), OTN, FEC, and ANS parameters.

See Import the Cisco ONP Configuration File into SVO.

SVO Networking

This feature allows the user to configure the virtual router IP address and Hot Standby Router Protocol (HSRP) group ID, while creating ROADM instance or container.

See Create an SVO Instance.

Standalone TXP Shelf

This feature allows the user to add standalone TXP chassis as standalone TXP node in the SVO admin plane. This allows the user to configure and manage the individual chassis with TXP or MXP modules from SVO.

See Cisco SVO Admin Plane Overview.

OTDR Support with TNCS-O and TNCS-2O

This feature allows the user to configure the OTDR ports of the TNCS-O and TNCS-2O cards. The user can configure OTDR sensitivity for loss and reflection. The user can also download the OTDR traces as a SOR file.

See OTDR Support.

Cisco SVO Admin Plane- External Server Solution

The Cisco SVO admin plane is hosted on an external server and supports high availability (HA). To achieve high availability, there are two servers connected to the network—local and remote. The local and remote servers are installed and configured using the same configuration file.

The admin planes on the local and remote servers are connected by two intercommunication links—through the HA network (primary link) and through the devices network (secondary link). Both links are used for the communication between the admin planes. The primary link is also responsible for replicating all the configuration transactions that are performed on each active SVO instance to the related standby SVO instance.

Each SVO instance is created on both the servers. The admin planes coordinate to automatically assign active and standby roles to the SVO instances. The admin planes can also perform an automatic switchover that promotes the standby instance to active when software or hardware faults affect the active instance.

Note This external server solution is available alongside with the admin plane that was implemented on the SVO line card. Both the admin planes will be converged in a future release.

The admin plane allows the user to:

- Create the admin user.
- Create or delete SVO instances of type ROADM, OLA, DGE, or TXP. The user can also view the details of the SVO instances.
- Control, monitor, and performs health checks of the SVO instances.
- Auto switch SVO instances during a software or hardware fault in the servers.
- Force a manual switch between the active and standby SVO instances.
- View parameters of the network configuration file.
- View list of allowed and blocked IP addresses.
- Troubleshoot using diagnostics. A zip file containing the log files from the admin plane can be downloaded.

See Cisco SVO Admin Plane- External Server Solution.

Support for Data Models

Data models can be used to automate configuration tasks across heterogeneous devices in a network.

Data models provide a well-defined hierarchy of the configurational and operational data of SVO, and NETCONF actions. The data models are programmed to provide a common framework of configurations to be deployed across networks. This common framework helps the user to program and manage a network with ease.

SVO Yang models can be accessed from https://github.com/YangModels/yang/tree/main/vendor/cisco/svo (Cisco.com **login** required).

See Cisco NCS 2000 Series SVO Data Models Configuration Guide, Release 12.0.1.

Hardware

Supported Cards

The following cards are supported in R12.0.1:

- 9-SMR17FS
- 9-SMR24FS
- 9-SMR34FS
- 20-SMRFS-CV

- RAMAN-CTP
- RAMAN-COP
- EDRA1-26C
- EDRA1-35C
- EDRA2-26C
- EDRA2-35C

See 9-SMR17FS, 9-SMR24FS, 9-SMR34FS, 20-SMRFS-CV cards, RAMAN-CTP and RAMAN-COP Cards, and EDRA-1-xx and EDRA-2-xx Cards.

Supported Passive Devices

The following passive devices are supported in R12.0.1:

- NCS2K-PPMESH8-5AD
- NCS2K-MF-6AD-CFS
- NCS2K-MF-DEG-5-CV
- NCS2K-MF-UPG-4-CV
- NCS2K-MF-MPO-8LC
- NCS2K-MF-M16LC-CV
- NCS2K-MF-10AD-CFS
- NCS2K-MF-16AD-CFS
- NCS2K-MF-4X4-COFS

See Manage Passive Devices.

Caveats

Open Caveats

The following table lists the open caveats:

Caveat ID Number	Description
CSCvv47383	[Light-UI] - Masks for Chrome browser not showing Logo

Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Other Important Information and References

Supported Upgrade Paths

The following software releases can be upgraded to R12.0.1

- R10.7.0.2
- R10.9.0.1
- R11.0
- R11.1
- R11.1.1.2